

**Toquop Energy Project**  
**Class I-B Operating Permit to Construct Application**

Submitted to  
**Nevada Division of Environmental Protection**  
**Bureau of Air Pollution Control**  
**Carson City, Nevada**

Prepared for  
**Toquop Energy, LLC**  
**Three Riverway Suite 1100**  
**Houston, TX 77056**

Prepared by



**Document Number 10784-004-400**

**July 2007**

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*State of Nevada*  
*Division of Environmental Protection*  
*Bureau of Air Pollution Control*

**APPLICATION FOR  
CLASS I OPERATING PERMIT TO CONSTRUCT**

Please return to: Nevada Division of Environmental Protection  
Bureau of Air Pollution Control, Class I Permitting Branch  
333 West Nye Lane  
Carson City, Nevada 89706-0851  
(775) 687-4670 FAX (775) 687-6396

**General Information**

- This application is available from the Bureau of Air Pollution Control in a Microsoft Word file, or on the internet at <http://www.ndep.nv.gov/bapc>. All information required in the application may be computer generated and submitted to the Bureau on 3-1/2" disk(s) or CD(s). In addition, one printed copy must be submitted.
- All information required by the "General Company Information" and by the relevant forms in Appendices 1 through 9 must be completed.
- The application filing fee required by NAC 445B.327 must be submitted with the completed application. The fee for a new Class I Operating Permit to Construct is \$50,000. The fee for a modification or revision of a Class I Operating Permit to Construct is \$5,000. Checks must be made payable to: Nevada State Treasurer, Environmental Protection.
- This application packet shall be used for construction of new Class I sources and construction and installation projects at existing Class I sources.
- Separate application forms for specific types of emission units are provided in Appendix 1. They include application forms for: (1) industrial processes, (2) combustion equipment, (3) storage silos, (4) liquid storage tanks and (5) surface area disturbances.
- An application for a Class I operating permit to construct must be signed by a responsible official, as defined in NAC 445B.156. The certification/signature page is contained in Appendix 9.
- All items in the application must be addressed. If an item does not apply "N/A" or similar notation must be entered in the appropriate blank. All other information must be provided. Incomplete applications will be returned to the responsible official within 45 working days of receipt of the application packet.

## GENERAL COMPANY INFORMATION

All applicants shall complete each item or explain in the space provided why no information is needed. Please specify "N/A" (Not Applicable) if necessary. The application will be returned to the applicant if it is deemed incomplete.

1. **COMPANY NAME AND ADDRESS THAT ARE TO APPEAR ON THE OPERATING PERMIT**  
[NAC 445B.295.1]:

Toquop Energy, LLC  
(Name)

Three Riverway, Suite 1100  
(Address)

Houston Texas 77056  
(City) (State) (Zip Code)

2. Owner's Name and Address [NAC 445B.295.1]:

Toquop Energy, LLC  
(Name)

Same as above  
(Address)

Same as above  
(City) (State) (Zip Code)

3. Source Name and Mailing Address, if different from #1 [NAC 445B.295.1]:

Toquop Energy, LLC  
(Name)

Same as above  
(Address)

Same as above  
(City) (State) (Zip Code)

4. Physical Location of Stationary Source [NAC 445B.295.8]: (if no physical address, describe location, e.g., 4 miles south of I-80 at xx Interchange)

Approximately 14 miles northwest of Mesquite, Nevada; I-15 Exit 109 at Old Spanish Trail (Halfmile Wash Road)  
and go approximately 14 miles north on dirt access road to the project location

Township(s) 11S Range(s) 69E Section(s) 36

5. Plant Manager or Other Appropriate Contact [NAC 445B.295.1]:

Thomas A. Johns Vice President, Development  
(Name) (Title)

Three Riverway, Suite 1100  
(Address)

Houston Texas 77056  
(City) (State) (Zip Code)

509-210-0762 713-499-1167 johns@sitheglobal.com  
(Telephone #) (FAX #) (E-mail address)

**GENERAL COMPANY INFORMATION (CONTINUED)**

6. Responsible Official Name, Title and Address [NAC 445B.295.1]:

<u>Dirk Straussfeld</u> (Name)	<u>President, Toquop Energy, LLC</u> (Title)	
<u>Three Riverway Suite 1100</u> (Address)		
<u>Houston</u> (City)	<u>Texas</u> (State)	<u>77056</u> (Zip Code)
<u>713- 499-1156</u> (Telephone #)	<u>713-499-1167</u> (FAX #)	<u>straussfeld@sitheglobal.com</u> (E-mail address)

7. If records required under the operating permit will be kept at a location other than the source, specify that location [NAC 445B.295.7].

<u>TBD</u> (Name)		
<u> </u> (Address)		
<u> </u> (City)	<u> </u> (State)	<u> </u> (Zip Code)

8. This application is submitted for (please check appropriate boxes below):

- ☒ A new Class I Operating Permit to Construct
- ☒ This application is for a source subject to PSD requirements (40 CFR § 52.21).
- ☒ This application is for a source subject to the following NSPS requirements (40 CFR § 60):
- A, Da, Dc, Y, OOO, HHHH, IIII
- 
- ☒ This application is for a source subject to the following NESHAP requirements (40 CFR § 63):
- DDDDD
- ZZZZ
- 
- 
- ☐ A modification of an existing Class I Operating Permit to Construct
- ☐ This application is for a source subject to PSD requirements (40 CFR § 52.21).
- ☐ This application is for a source subject to the following NSPS requirements (40 CFR § 60):
- 
- 
- ☐ This application is for a source subject to the following NESHAP requirements (40 CFR § 63):
- 
- 
- ☐ The revision of an existing Class I Operating Permit to Construct
- ☐ This application is for a source subject to PSD requirements (40 CFR § 52.21).
- ☐ This application is for a source subject to the following NSPS requirements (40 CFR § 60):
- 
- 
- ☐ This application is for a source subject to the following NESHAP requirements (40 CFR § 63):
- 
-

**GENERAL COMPANY INFORMATION (CONTINUED)**

9. The application must contain, if applicable:
- a. For a proposed new major source, or a proposed significant modification to an existing stationary source which is not subject to the provisions of 40 CFR §52.21, include all information as required by NAC 445B.308 to 445B.313, inclusive [NAC 445B.3363.2(b)].
  - b. For stationary sources subject to the provisions regarding new source review set forth in 42 USC §§7501 - 7515, inclusive (nonattainment areas), all information required by 42 USC §7503 [NAC 445B.3363.2(b)(3)].
  - c. For a proposed new major source or a proposed significant modification to an existing stationary source that is subject to the provisions of 40 CFR §52.21, include all information required by 40 CFR §52.21 [NAC 445B.3363.2(a)].
10. Will the construction occur in more than one phase?    ☐ Yes        ☒ No
11. If the construction will occur in more than one phase, please provide the projected date of the commencement for each phase of construction:
- Phase 1: \_\_\_\_\_
- Phase 2: \_\_\_\_\_
- Phase 3: \_\_\_\_\_
12. For a modification of a stationary source, provide a Compliance Assurance Monitoring (CAM) plan for all emission units subject to the monitoring requirements of 40 CFR Part 64. For significant revisions provide a CAM plan for those emission units for which a significant revision to the operating permit is requested and which is required pursuant to the monitoring requirements of 40 CFR Part 64. If a CAM plan is not required, provide an explanation. [NAC 445B.295.8]
13. Application Submittal:
- Please remove the cover page, Table of Contents and General Information page and all Attachments of the application packet. Submit the remainder of the application packet as your formal application. This should consist of, at a minimum, the Class I Application cover page, the general Company Information, and Appendices 1 through 9.

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## OVERVIEW

Toquop Energy, LLC proposes to construct and operate a coal-fired electric power generating facility, alternating current (AC) power substation, and AC/direct current converter station, the Toquop Energy Project (“TEP” or “Project”), is proposed to be located approximately 14 miles northwest of Mesquite in Lincoln County, Nevada (**Figure 1-1**). The proposed power project will generate up to 750 megawatts (MW) (gross) of electricity from one supercritical coal-fired steam generation unit fueled primarily by sub-bituminous coal from the Powder River Basin.

The proposed power plant site is located on approximately 640 acres of Bureau of Land Management (BLM) land, with primary access to the project site from Interstate 15, Exit 109 via Halfmile Wash Road. Other support facilities include a planned rail spur, construction/secondary access roads, transmission lines, water supply lines, and ground electrode lines. These facilities are depicted in Appendix 7.

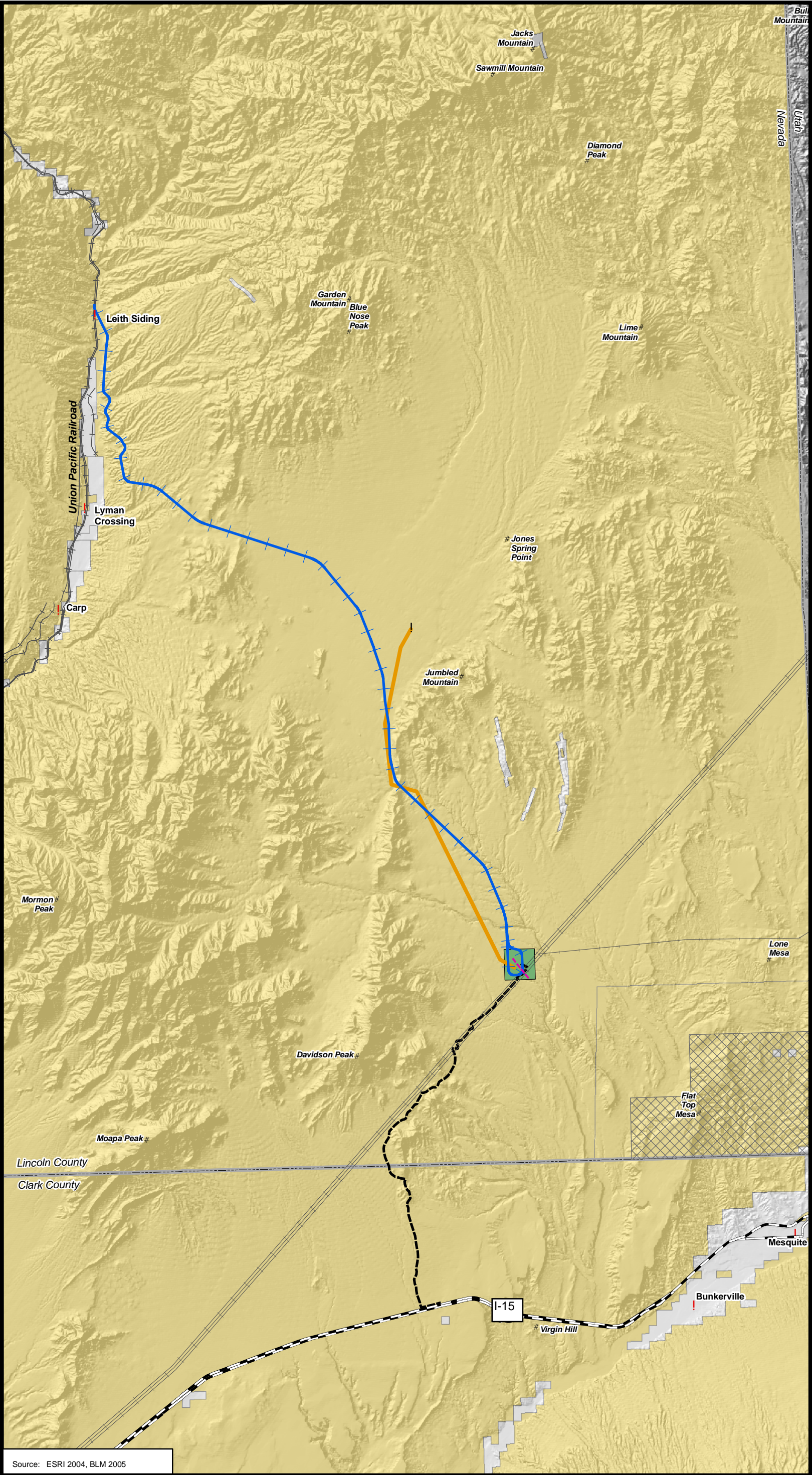
Toquop Energy, LLC expects to market certain components of the coal combustion products (CCP) such as fly ash, bottom ash, and flue gas desulfurization (FGD) by-product to potential customers for beneficial reuse. In the event not all of the CCP can be marketed for reuse, CCP disposal is proposed at a site located adjacent to the power plant location. A hard-surfaced access road will be constructed from the power plant to the CCP landfill.

Following approval of all permitting requirements, Toquop Energy, LLC plans to begin construction in approximately July 2008. Construction will span a period of almost 4 years with operation of the TEP projected to begin in late 2012. The power plant is expected to operate for approximately 50 years.

This project will replace the Toquop Energy Project, a 1,100-megawatt (MW) natural gas-fired water-cooled electric power generating plant in Lincoln County in southern Nevada. The power plant site was located near the Toquop Wash, approximately 50 miles south-southeast of Caliente, Nevada, and 12 miles northwest of Mesquite, Nevada. In April 2003, the Bureau of Land Management (BLM) Ely Field Office issued a Final Environmental Impact Statement (EIS) for the Toquop Energy Project.



P:\Site - Toquop\GIS\ref\Basemap\Basemap.pdf



# Surface Management and Project Components

Toquop Energy Project EIS  
Lincoln County, Nevada

## LEGEND

### Surface Management

- Bureau of Land Management
- Private

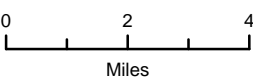
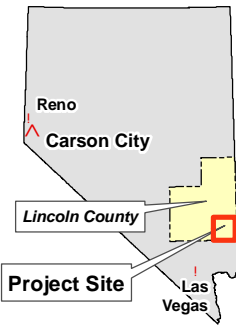
### General Features

- Proposed Railroad Line
- Proposed Coal-fired Plant Site (640 acres)
- Permitted Well Field
- Permitted Water Pipeline
- Permitted Natural Gas Pipeline and Transmission Line Interconnection
- Permitted Access Road
- Lincoln County Land Act Parcels

### Reference Features

- Existing Road
- Interstate
- Existing Railroad
- Existing Transmission Line
- Existing Pipeline
- Town

DRAFT February 2007



Source: ESRI 2004, BLM 2005

URS

Map 1-1



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The following is a list of the primary operational equipment that is addressed in this application:

- One 750 MW (gross) pulverized supercritical coal-fired boiler;
- Two auxiliary boilers;
- One diesel emergency generator engine;
- One diesel firewater pump engine;
- One fly ash storage silo;
- One bottom ash storage silo;
- One gypsum storage silo;
- Two quicklime storage silos;
- One activated carbon storage silo;
- One byproduct storage silo;
- One Heller-type natural draft cooling tower;
- Coal unloading, transfer, storage, reclaim, and crushing operations;
- One 1,060,000-gallon fuel oil storage tank; and
- Insignificant activities, including fuel oil, lube oil, used oil, and gasoline storage tanks <15,000 gallons.

Since the proposed facility will be a “major source” of criteria air pollutants, Toquop Energy, LLC is applying to the Nevada Division of Environment Protection, Bureau of Air Pollution Control (BAPC) for an Operating Permit to Construct for this facility as a part of the federally delegated Prevention of Significant Deterioration (PSD) program.

This application addresses the permitting requirements specified by the BAPC under the Nevada Administrative Code, Chapter 445B. Supporting documentation and information is included in Appendices 1 through 11. For instance, application forms are contained in Appendix 1, emissions calculations in Appendix 5, facility maps and diagrams in Appendix 7, modeling results in Appendix 8, and Best Available Control Technology review in Appendix 10.

### **General Applicant Information**

To facilitate the BAPC's review of this document, individuals familiar with both the facility and the preparation of this application are identified. The BAPC should contact these individuals if additional information or clarification is required during the review process. These contacts include contractors/consultants who have assisted with the preparation of this application under the direction of Toquop Energy, LLC.

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## **Applicant's Contacts**

### Permitting Manager

Tom Johns, Vice President-Development  
Toquop Energy, LLC  
Three Riverway, Suite 1100  
Houston, Texas 77056  
Telephone – (509) 210-0762  
Fax – (713) 499-1167  
[johns@sitheglobal.com](mailto:johns@sitheglobal.com)

### Corporate Environmental Contact

Dirk Straussfeld, President  
Toquop Energy, LLC  
Three Riverway, Suite 1100  
Houston, Texas 77056  
Telephone – (713) 499-1156  
Fax – (713) 499-1167  
[straussfeld@sitheglobal.com](mailto:straussfeld@sitheglobal.com)

### Permitting Consultant

William Campbell, III, P.E.  
Senior Program Manager  
ENSR Corporation  
4600 Park Road, Suite 300  
Charlotte, North Carolina 28209  
Telephone – (704) 529-1755  
Fax – (704) 529-1756  
[bcampbell@ensr.aecom.com](mailto:bcampbell@ensr.aecom.com)

## **Project Location**

The proposed facility will be constructed on a site that consists of approximately 640 acres of BLM land located approximately 14 miles northwest of the Mesquite, Lincoln County, Nevada. Specifically, the proposed project site is located in Township 11 South, Range 69 East, Section 36. A topographic map of the site region, a preliminary plot plan, process flow diagram, and facility layout are presented in Appendix 7.

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## **Surrounding Property**

Appendix 7 shows the land use within the region surrounding the proposed TEP site. From review of the Appendix 7 figure, it is noted that the region surrounding the site is characterized as primarily rural. Within this predominantly rural area are:

- Undeveloped land;
- Open range; and
- Sparsely located agricultural areas.

## **Facility Classification**

There are two major classification criteria for the proposed facility, one related to its industrial character and the other to its potential to emit air contaminants. The designation of the facility under each of these is reviewed below.

### **Standard Industrial Classification (SIC) Code**

The United States (U.S.) government has devised a method for grouping all business activities according to their participation in the national commerce system. The system is based on classifying activities into "major groups" defined by the general character of a business operation. For example, electric, gas, and sanitary services, which include power production, are defined as a major group. Each major group is given a unique two-digit number for identification. Power production activities have been assigned a major group code "49".

To provide more detailed identification of a particular operation, an additional two-digit code is appended to the major group code. In the case of power generation facilities, the two digit code is "11" in order to define the type of production involved. Thus, the TEP is classified under the SIC code system as:

- "Major Group" 49 – "Electric, Gas, and Sanitary Services"; and
- Electric Services – 4911.

The SIC Code system will eventually be replaced by North American Industrial Classification System. This system's organization is similar to the SIC codes. Under this system, this facility would be classified under 221112, Fossil Fuel Electric Power Generation.

## **Air Quality Source Designation**

With respect to air quality, new and existing industrial sources are classified as either major or minor sources based on their potential-to-emit (PTE) air contaminants. This classification also is

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affected in part by whether the area in which the source is located has attained the National Ambient Air Quality Standards (NAAQS)<sup>1</sup>. An area is classified as attainment if the ambient air quality concentration for a specific pollutant as measured by a monitor is below the standard concentration level for a set averaging period. The area in which the project is proposed to be located is designated as attainment for all the NAAQS.

For most activities, a major source is defined as one which has the PTE 250 tons per year (tpy) of any regulated air contaminant. For a special group of 28 industrial activities (see Appendix 3), the U.S. Environmental Protection Agency (USEPA) has defined the major source emission threshold to be 100 tpy. Fossil-Fuel-Fired Steam Electric Plants is one of these special 28 industrial groups; therefore, fugitive emissions also will be calculated in accord with PSD regulations.

As will be shown in Appendix 5, potential emissions from the proposed facility will exceed the major source threshold level for oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxides (SO<sub>2</sub>), volatile organic compounds (VOCs), particulates (total suspended particulates/particulates with an aerodynamic diameter less than 10 microns [PM<sub>10</sub>]), sulfuric acid mist, and lead (Pb). The facility also will be a major source of hazardous air pollutants. Therefore, the project will be classified as a “major stationary source” of air emissions.

### **Past Permitted Activities**

The proposed project will be a greenfield development. There are currently no permitted activities on the project site that require issuance of an air permit.

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<sup>1</sup> Criteria pollutants are those for which the USEPA has established NAAQS and consist of PM<sub>10</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, Pb, and ozone, which is formed through the photochemical reaction of VOC and NO<sub>x</sub> in the atmosphere.

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